WHAT IS CLAIMED IS:

- A method for treating ICU-associated hypocalcemia in a mammal to restore or maintain ionized serum calcium in said mammal which comprises administering to said mammal a therapeutically effective amount of a vitamin D compound.
- 2. The method of claim 1 wherein the vitamin D compound is selected from compound having Formula I.
- 3. The method of claim 1 wherein the vitamin D compound is administered in an amount of from about 0.1 micrograms to about 2 milligrams per day depending upon the vitamin D compound administered.
- 4. The method of claim 1 wherein the vitamin D compound is administered
 15 daily to said mammal for about 1-4 weeks.
 - The method of claim 1 wherein the vitamin D compound is combined with a non-toxic pharmaceutically acceptable carrier prior to administration.
- 20 6. The method of claim 1 wherein the vitamin D compound is vitamin D₃ or a vitamin D₃ derivative.
 - 7. The method of claim 6 wherein the vitamin D compound is 1,25-dihydroxy vitamin D_3 .
- 25 8. The method of claim 1 wherein the vitamin D compound is vitamin D_2 or a vitamin D_2 derivative.
- 9. The method of claim 8 wherein the vitamin D_2 compound is 1 , 25-dihydroxy- 30 19-nor ergocalciferol.